

**REMARKS**

This is in response to a non-final Office Action dated September 21, 2007. Claims 71, 72, 76, and 81-92 were pending in the patent application at the time that the Office Action was mailed.

In the Office Action, claims 71, 72, 76, and 81-92 were rejected under 35 U.S.C. § 112, second paragraph. Claims 71, 72, 76, 81, 82, 85, and 92 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 2,092,218 to Kitsuda ("Kitsuda") and U.S. Patent No. 5,954,458 to Lee ("Lee"). Claim 92 was rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 3,899,654 to Walton ("Walton"). Claims 71, 72, 76, and 81-85 were rejected under 35 U.S.C. § 103(c) as being allegedly unpatentable over Walton in view of Kitsuda and Lee. Claims 86, 87, and 89 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Walton in view of Kitsuda, Lee, and in further view of U.S. Patent No. 5,414,927 to Fiel et al ("Fiel") as evidenced by U.S. Patent No. 4,171,477 to Funari ("Funari"). Claims 88 and 90 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Walton in view of Kitsuda, Lee, Fiel, and Funari, and in further view of Sweetland.

By this Amendment, claims 81 and 92 have been amended. No new matter has been added. Support for the amendments to claims 81 and 92 can be found in the specification beginning with the second paragraph of p. 5 through the end of p. 6. Support for new dependent claims 93-99 can be found in the last paragraph of p. 6. Support for new dependent claim 100 can be found in the second paragraph of p. 5. Support for new dependent claim 101 can be found in first paragraph of p. 7.

**35 U.S.C. § 112, Second Paragraph**

In the Office Action, claims 71, 72, 76, and 81-92 were rejected under 35 U.S.C. § 112, second paragraph. The Office Action states that claims 81 and 92 recite "the limitation 'such that the light can illuminate a working surface' in lines 4-5, and that this

recitation is not definitive to whether the light can or cannot illuminate the working surface.” Applicants respectfully submit that lines 4-5 of claims 81 and 92 explicitly recite that the light “can illuminate a working surface proximate the detachable solder tip.” Accordingly, claims 81 and 92 are definitive as to whether the light can or cannot illuminate a working surface.

**35 U.S.C. § 102(b)**

1. Kitsuda and Lee

Claims 81 and 92 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Kitsuda and Lee. As amended, claims 81 and 92 recite that the detachable solder tip comprises “first and second electrodes disposed in a spaced apart manner at the terminal end of the detachable solder tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical communication with the first and second electrodes to enable electrical current to flow through the detachable solder tip.”

Kitsuda is generally directed to a portable electric lamp with an igniter for use in igniting a gas burner (Kitsuda, p. 1, col. 1, ln. 1-3). The Office Action states that “Kitsuda discloses an igniter (7) comprising a filament (19) that reaches temperatures high enough to ignite an air gas mixture. The temperatures would be high enough to melt thin low temperature solders known in the art. Therefore, Kitsuda fully meets 'a cordless soldering tool' given its broadest reasonable interpretation.” Applicants respectfully submit that Kitsuda does not anticipate claims 81 and 92.

a. Kitsuda does not disclose a soldering tool

As a first matter, Applicants respectfully submit that Kitsuda does not disclose a soldering tool. Particularly, Kitsuda does not disclose “a detachable solder tip,” as recited in ln. 3 of independent claims 81 and 92. Rather, Kitsuda discloses a filament 19 located

inside an ignition chamber 7' having an open top end 23 "covered by a spaced top baffle disc 24 which is supported by a plurality of legs 25" (Kitsuda, p. 2, col. 2, ln. 33-47). Since the filament 19 is located inside the ignition chamber 7', the filament 19 does not contact objects outside the ignition chamber 7'. Accordingly, the filament 19 does not provide a detachable solder tip.

b. Kitsuda does not disclose a tip with spaced apart electrodes to be shorted by external material

Secondly, Kitsuda does not disclose "first and second electrodes disposed in a spaced apart manner at the terminal end of the detachable solder tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical communication with the first and second electrodes to enable electrical current to flow through the heating device," as recited in claims 81 and 92. Rather, as discussed in the preceding paragraph, Kitsuda discloses a filament 19 located inside an ignition chamber 7' (Kitsuda, p. 2, col. 2, ln. 33-47). In particular, Kitsuda does not disclose (i) electrodes (ii) spaced apart (iii) to be shorted.

The Office Action states that claims 81 and 92 are rejected as being anticipated by both Kitsuda and Lee. However, the body of the rejection does not mention Lee. It appears that Lee was inadvertently included in the rejection under 35 U.S.C. § 102(b). Nevertheless, Applicants respectfully submit that Lee also does not anticipate claims 81 and 92.

c. Lee does not disclose a soldering tool or first and second electrodes

Applicants respectfully submit that Lee does not disclose a "soldering tool," as recited in claims 81 and 91. Rather, Lee is directed to a cordless drill (Lee, title). The drill 20 does not include "a detachable solder tip" or "first and second electrodes," as recited in claims 81 and 92. Instead, Lee's drill 20 includes a standard chuck 28.

2. Walton

Claim 92 was rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Walton. As amended, claim 92 recites that the detachable solder tip comprises "first and second electrodes disposed in a spaced apart manner at the terminal end of the tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical," and a "user-operable switch capable of selectively powering the light without powering the detachable solder tip unless a short is created across the first and second electrodes."

The Office Action states that Walton discloses a "cordless soldering tool (Title) comprising: a handheld body adapted to house an electrical power storage source; a detachable solder tip mounted on the handheld body (elongated body 11) (column 4, lines 1-10; see Figures 4-7); a light (lamp 45) located on the handheld body (elongated body 11), wherein the light is oriented such that the light can illuminate a working surface proximate the detachable solder tip (see Figures 1,2); and a user-operable switch (push button 20) mounted on the handheld body (elongated body 11) and electrically connected in series with the light (lamp 45) so that the light (lamp 45) and the user-operable switch (pushbutton 20) are electrically connected in parallel with respect to the detachable solder tip (tip 55)." Applicants respectfully submit that Walton does not anticipate claim 92, as amended.

a. Walton does not disclose a tip with spaced apart electrodes to be shorted by external material

As a first matter, Walton does not disclose a tip having first and second electrodes "disposed in a spaced apart manner at the terminal end of the tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical communication," as recited in claim 92. Rather, Walton discloses an elongated, heatable, metallic member 56 that is

hollow and closed at one end to provide a soldering tip 58 (Walton, col. 3, ln. 54-60 and FIG. 6). Inside the metallic member 56, a heating element 60 permanently shorts electrical conductors 62 and 63, which provide support and electrical energy to the heating element 60 (Walton, col. 4, ln. 1-6 and FIG. 7). To prevent a short circuit between the heating element 60 and the elongated, heatable, metallic member 56, insulation material 61 is placed therebetween (col. 3, ln. 61-68). Since Walton's soldering tip 58 is provided by a single metallic member 56, it does not include spaced apart electrodes. Furthermore, since the soldering tip 58 is electrically insulated from the rest of the soldering tool, electrical current does not flow through the soldering tip 58. Accordingly, a short cannot "be created upon placing an electrically conductive material external" to the soldering tool in electrical communication with Walton's soldering tip 58, as recited in amended claims 1 and 32.

- b. Walton does not disclose a switch capable of selectively powering the light without powering the detachable solder tip

Secondly, Walton does not disclose (as recited in claim 92):

A user-operable switch mounted on the handheld body and electrically connected between the detachable solder tip an the light and the electrical power storage source, the user-operable switch capable of selectively powering the light without powering the detachable solder tip unless a short is created across the first and second electrodes.

Instead, Walton discloses a push button 20 that opens and closes a connection between the conductor 63 and a battery 25 (Walton, col. 3, ln. 3-14). As a result, the lamp 45 illuminates while the heating element 60 heats (Walton, col. 3, ln. 44-49). Accordingly, Walton fails to disclose a "switch capable of selectively powering the light without powering the detachable solder tip unless a short is created across the first and second electrodes."

**35 U.S.C. § 103(a)**

1. Claim 81

Claim 81 was rejected under 35 U.S.C. § 103(c) as being allegedly unpatentable over Walton in view of Kitsuda and Lee. As amended, claim 81 recites that the detachable solder tip comprises "first and second electrodes disposed in a spaced apart manner at the terminal end of the detachable solder tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical communication."

a. Walton

The Office Action states that Walton discloses a "cordless soldering tool (Title) comprising: a handheld...and an electrical switch (push button 20) for selectively powering the light with powering the detachable solder tip." As discussed above with respect to claim 92, Walton does not disclose a tip having first and second electrodes "disposed in a spaced apart manner at the terminal end of the tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical communication." This recitation is also included in claim 81. Accordingly, Walton does not disclose the cordless soldering tool of claim 81.

b. Kitsuda

The Office Action combines Walton with Kitsuda to teach an electrical switch selectively powering the light without powering the detachable solder tip. As amended, claim 81 recites a "switch capable of selectively powering the light without powering the detachable solder tip unless a short is created across the first and second electrodes." As discussed above with respect to the rejection of claim 81 under 35 U.S.C. § 102(b), Kitsuda does not disclose this recitation. Applicants respectfully submit that Kitsuda alone,

or in combination with Walton and/or Lee does not disclose the soldering tool recited in amended claim 81.

c. Lee

The Office Action combines Walton and Kitsuda with Lee, and cites Lee for teaching “a cordless portable device with a separate switch for powering the light and not the device having the advantage of not unnecessarily draining the battery when the device is in use, thereby increasing the operational longevity of the cordless device on a single charge.” Applicants respectfully submit that Lee alone, or in combination with Walton and/or Kitsuda does not disclose the soldering tool recited in claim 81.

Lee does not disclose “first and second electrodes disposed in a spaced apart manner at the terminal end of the detachable solder tip...” as recited in claim 81. Rather, Lee discloses a standard chuck 28 (Lee, col. 2, ln. 55-61). Lee does not disclose a solder tip because Lee is directed to an electric power drill (Lee, abstract). In particular, Lee does not disclose (i) electrodes (ii) spaced apart (iii) to be shorted.

For the foregoing reasons, Applicants respectfully submit that Walton, Kitsuda, and Lee, taken singly or in combination, do not disclose a soldering tool with a tip having “first and second electrodes disposed in a spaced apart manner at the terminal end of the detachable solder tip, such that a short is created across the first and second electrodes upon placement of an electrically conductive material external to the soldering tool in electrical communication,” as recited in claim 81.

**New Claims**

New dependent claims 93 and 96 recite that the tip “generates heat during the time that a short is created across the electrodes.” New dependent claims 93 and 97 recite that the tip “cools when a short across the first and second electrodes is removed.” New

dependent claims 94 and 98 recite that the “the detachable solder tip can heat to 600°F.” New dependent claims 95 and 99 disclose that “the electrically conductive material is solder.” New dependent claim 100 recites “an insulator disposed between the first and second electrodes.” New dependent claim 101 recites that “the light is a light emitting diode.” Since none of Walton, Kitsuda, or Lee disclose the recitations of independent claims 81 and 92, none of these references disclose the recitations of dependent claims 93-101.

### Conclusion

In light of the foregoing remarks, Applicants respectfully submit that independent claims 81 and 92 are now in condition for allowance, and that dependent claims 71, 76, 82, 86-101 are also patentable based upon the arguments presented and at least based upon their dependency from patentable independent claims. Accordingly, Applicants respectfully request that the rejections and objections be withdrawn, and that the case be allowed to issue.

If the Applicants' representative can be of assistance in furthering the prosecution of this case, the Examiner is encouraged to contact the undersigned at any time, at (202) 434-1607.

Dated: October 30, 2007

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